

**CONSTRUCTION PERMIT  
AIR QUALITY MANAGEMENT SECTION**

Environmental Resources Management Division  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221-2097

**Statewide Medical Services  
3601 East 9<sup>th</sup> Street  
Indianapolis, Indiana 46201-2511**

is hereby authorized to construct

One (1) Brookes DRB 800 batch incinerator (Emission Unit ID# 001), with a maximum operating capacity of one (1) ton per day (4000 lb per batch, where a batch consists of a 48 hour period), constructed in September, 1998, using natural gas as a primary fuel.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of IAPCB Regulation 2, 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP 097-11490-00339	
Issued by:  Robert F. Holm, Ph.D., Administrator Environmental Resources Management Division	Issuance Date:

## Construction Conditions

### General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Environmental Resources Management Division (ERMD), Air Quality Management Section.
2. That this permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of Chapter 5 of the Code of Indianapolis and Marion County and the regulations promulgated thereunder, Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### Effective Date of the Permit

3. That pursuant to IAPCB Regulation 2 (Permits) and IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2-1-9(b), the Administrator may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2 (Permit Review Rules).

### First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
  - (a) The attached affidavit of construction shall be submitted to the Environmental Resources Management Division (ERMD), Air Quality Management Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or delivered to ERMD.
  - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
  - (c) Permittee shall receive an Operation Permit Validation Letter from the Environmental Resources Management Division (ERMD) and attach it to this document.
  - (d) That the operation permit will be subject to annual operating permit fees pursuant to IAPCB Sec. 511 (Permit fees).
  - (e) Pursuant to 326 IAC 2-1-4, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. The operation permit issued shall contain as a minimum the conditions in the Operation

Conditions section of this permit.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

### **Operation Conditions**

#### General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in IAPCB Regulation 2 (Permits) and 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Environmental Resources Management Division (ERMD), Air Quality Management Section.
2. That the Permittee shall comply with the provisions of Chapter 5 of the Code of Indianapolis and Marion County and the regulations promulgated thereunder, Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

#### Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), Statewide Medical Services shall prepare and maintain a preventive maintenance plan, including the following information:
  - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing the facility equipment.
  - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
  - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to the Environmental Resources Management Division (ERMD) upon request and shall be subject to review and approval.

#### Transfer of Permit

4. That pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2-1-6 (Transfer of Permits):
  - (a) In the event that ownership of this infectious medical waste incinerator is changed, the Permittee shall notify the Environmental Resources Management Division, Air Quality Management Section and the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM), Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
  - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
  - (c) The ERMD and OAM shall reserve the right to issue a new permit.

#### Permit Revocation

5. That pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2-1-9(a) (Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) For any cause which establishes in the judgment of ERMD and IDEM, the fact that continuance of this permit is not consistent with purposes of IAPCB Regulation 2 (Permits) and 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(I), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the ERMD, IDEM, or other public official having jurisdiction.

Performance Testing

7. That pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2-1-3 (Construction and Operating Permit Requirements) PM compliance stack test shall be performed on the Infectious Waste Incinerator EU ID #001; also in order to determine the Potential To Emit (PTE) other pollutants will be tested as follow:

A two (2) hour stack test shall be performed every 16 hours during the total batch process for PM (5), visible emissions (9), and HCl (26). A continuous stack test throughout the batch process shall be performed for carbon monoxide (10), and NOx (7), where the numbers represent the reference method used in conducting the tests respectively according to 40 CFR, part 60, appendix A.

The tests shall be performed within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Administrator.

- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, and ERMD, Air Quality Management Section, Compliance Data Group, 35 days in advance of the test.
- (b) The OAM, Compliance Data Section, and ERMD, Compliance Data Group, shall be notified of the actual test date at least two (2) weeks prior to the date.
- (c) All tests reports must be received by OAM, Compliance Data Section, and ERMD, Compliance Data Group, within 45 days of completion of the testing.
- (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM and ERMD that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
- (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

Malfunction Condition

8. That pursuant to IAPCB Regulation 1-6-2 (Malfunctions and scheduled maintenance) and 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Environmental Resources Management Division (ERMD), upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to ERMD, using the Malfunction Report Forms (one page). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of IAPCB Regulation 1-6 and 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in IAPCB Regulation 1-6-2(a)(1) through (6) and 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [IAPCB Regulation 1-2-39 and 326 IAC 1-2-39]

Solid Waste Incinerators

9. That pursuant to IAPCB Regulation 4-2 (Particulate emissions from incinerators) and 326 IAC 4-2 (Incinerators), this natural gas fired incinerator EU ID # 001 shall:

- (a) Consist of primary and secondary chambers or the equivalent.
- (b) Be equipped with a primary burner unless burning wood products.
- (c) Comply with IAPCB Regulation 5-1 (Smoke and other visible emissions), 326 IAC 5-1 (Opacity Limitations), and IAPCB Regulation 2 (Permits), 326 IAC 2 (Permit Review Rules).
- (d) Be maintained properly as specified by the manufacturer and approved by ERMD.
- (e) Be operated according to the manufacturer's recommendation and only burn waste approved by ERMD and IDEM.
- (f) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators.
- (g) Be operated so that emissions of hazardous material including, but not limited to, viable pathogenic bacteria, dangerous chemical or gases, or noxious odors are prevented.
- (h) Not create a nuisance or fire hazard.
- (i) Not emit particulate matter (PM) in excess of (0.3) pounds per 1000 pounds of dry exhaust gas corrected to 50% excess air.

The operation of these medical waste combustors shall be terminated immediately upon noncompliance with any of the above mentioned requirements.

Opacity Limitations

10. That pursuant to IAPCB Regulation 5-1-2 (Smoke and other visible emissions) and 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in IAPCB Regulation 5-1-3 (Exception) and 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- a) Visible emissions shall not exceed an average of 30% opacity in 24 consecutive readings.
- b) Visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Waste/fuel stream Limitation

11. The permittee shall limit the fuel feed stream for the incinerator Emission Unit ID # 001 to a fuel feed stream, 10 (ten) percent or less of the weight of which it is comprised, in aggregate, of hospital waste and medical/infectious waste as measured on a calendar quarter basis. Pathological waste, chemotherapeutic waste, and low-level radioactive wastes are considered to be other than hospital waste and medical/infectious waste for the purposes of calculating the percentage of hospital waste and medical/infectious waste combusted. Pursuant to 40 CFR 60, Subpart Ec, Section 60.50.c, the owner (operator) of this source shall :

- (a) Notify the EPA, ERMD and IDEM (OAM) of the exemption claim using the Exemption Claim Form (one page);
- (b) Provide an estimate of the relative amounts of hospital waste, medical/infectious waste, and other fuels and wastes to be combusted.

Recordkeeping and Reporting

12. Pursuant to 40 CFR 60, Subpart Ec, Section 60.50.c, the owner of this source shall:

- (a) keep records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted;
- (b) report semiannually the weight of the hospital and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted, measured on a quarterly basis, using the Semiannual Report form (one page), no later than 60 days following the reporting period.
- (c) obtain and record keep the certifications from the waste generating facilities that the waste submitted for combustion is free of mercury;
- (d) maintain the required records for a period of at least 5 years;
- (e) reports are to be sent to:

Environmental Resources Management Division  
Air Quality Management Section, Compliance Data Group  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221-2097

Statewide Medical Services  
Indianapolis, Indiana  
Permit Reviewer: Boris Gorlin

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Pit ID 097-00339

Mail to: Air Quality Management Section  
Environmental Resources Management Division  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221-2097

Statewide Medical Services  
3601 East 9<sup>th</sup> Street  
Indianapolis, Indiana 46201-2511

### Affidavit of Construction

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make  
these representations on behalf of \_\_\_\_\_.  
(Company Name)
4. I hereby certify that, Statewide Medical Services has constructed the following: One (1) Brookes DRB 800 batch incinerator (Emission Unit ID# 001), with a maximum operating capacity of 4000 lb per batch (where a batch consists of a 48 hour period), using natural gas as a primary fuel.

Each unit is in conformity with the requirements and intent of the construction permit application received by the Environmental Resources Management Division on September 28<sup>th</sup>, 1998, as permitted pursuant to **Construction Permit No. CP 097-11490-00339, Plant ID No. 097-00339**, issued on \_\_\_\_\_.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of Indiana  
on this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (typed or printed)

**City of Indianapolis**  
**Environmental Resources Management Division**  
**Compliance Data Group**  
**2700 S. Belmont Ave.**  
**Indianapolis, Indiana 46221-2097**  
**Phone 317 / 327-2234, Fax: 317 / 327- 2274**

**Malfunction / Excess Emissions Report**

Company Name: **Statewide Medical Services**  
Location: **3601 East 9<sup>th</sup> Street, Indianapolis, Indiana 46201-2511**  
Construction Permit No.: **097-11490-00339**

Source/Facility: One (1) Brookes DRB 800 batch incinerator (Emission Unit ID# 001), with a maximum operating capacity of 4000 lb per batch (where a batch consists of a 48 hour period), using natural gas as a primary fuel.

Affected Facility:
Date of Malfunction:
Start Time of Malfunction:
Duration Time of Out of Service:
Pollutant/s Emitted During Malfunction: PM, PM10, SO <sub>2</sub> , VOC, Other:
Estimate of Amount of Pollutant Emitted During the Malfunction (include how estimate was determined):
Measures Taken to Minimize Shutdown Time:
Reasons Why Facility Cannot be Shutdown During Repairs:
Interim Control Measures:
Measures Taken to Correct Malfunction:
Malfunction Reported By:  Title:  Signature:  Date: _____ Time: _____

The filing of such information is mandated by Federal, State, and Local Air Pollution Legislation. Violation of this mandate through omission or false information may be subject to penalty.

I hereby certify that the information contained in this notification is complete and accurate to the best of my knowledge.

by: \_\_\_\_\_ Title/Position: \_\_\_\_\_  
(Print)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**EXEMPTION CLAIM**  
(Cofired combustors)

**FACILITY INFORMATION**

Facility name: \_\_\_\_\_

Facility address: \_\_\_\_\_

Contact person Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Type of facility: \_\_\_\_\_

**WASTE INFORMATION**

Please provide the distribution of types of wastes combusted in the incinerator each quarter (i.e., every 3 months):

% Hospital waste and medical/infectious waste (excluding wastes marked with a \* below)

% Pathological waste, low-level radioactive waste, and chemotherapeutic waste\*

% Other waste/fuel<sup>1</sup>

Does the incinerator accept waste from off-site?      **9**Yes      **9**No

How many pounds of waste/fuel<sup>1</sup> do you typically charge per hour? \_\_\_\_\_ lb/hr

How many hours do you charge waste/fuel<sup>1</sup> into the incinerator per day? \_\_\_\_\_ hr/day

How many pounds of waste/fuel<sup>1</sup> is burned on a quarterly basis? \_\_\_\_\_ lb/quarter

Please attach an explanation of the methodology that will be used on an ongoing basis to estimate the percentages of waste types discussed above.

**CERTIFICATION**

I am authorized to make this submission on behalf of the owners and operators of \_\_\_\_\_ and I hereby certify under penalty of law that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including possible fines and imprisonment. In addition, it is my understanding that I am not subject to a title V permit based solely on the requirements of Subpart Ce (Emission Guidelines).<sup>2</sup>

\_\_\_\_\_  
Signature of facilities manager

<sup>1</sup>excluding fuels such as propane or natural gas used to maintain combustion chamber temperatures .

<sup>2</sup>Incinerators located at major sources should have already submitted a title V permit to the permitting authority.

INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION  
AIR QUALITY MANAGEMENT SECTION  
DATA COMPLIANCE

**Semiannual Report**

**Hospital and medical / infectious waste incineration**

Source Name: Statewide Medical Services  
Source Address: 3601 East 9<sup>th</sup> Street, Indianapolis, Indiana 46201-2511  
Mailing Address: 3601 East 9<sup>th</sup> Street, Indianapolis, Indiana 46201-2511  
Construction Permit: CP099-0339-01  
Facility: Emission Unit ID #001  
Parameters: Weight, in aggregate, of hospital waste and medical/infectious waste,  
and the weight of all the other fuels and wastes combusted

Limits: 10% or less of the weight, in aggregate, of the weight of which it is  
comprised, of hospital waste and medical/infectious waste as measured  
on a calendar quarter basis

Quarters: \_\_\_\_\_ Year: \_\_\_\_\_

Parameter	Quarter /	Quarter /
<b>Total weight of waste and fuels combusted, ton</b>		
<b>Hospital and medical/infections waste combusted, ton</b>		
<b>Percent of hospital and medical/infections waste combusted, %</b>		

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**Indianapolis Environmental Resources Management Division  
Air Quality Management Section**

and

**Indiana Department of Environmental Management  
Office of Air Management**

**Technical Support Document (TSD) for New Construction and Operation**

**Source Background and Description**

Source Name:	Statewide Medical Services
Source Location:	3601 East 9 <sup>th</sup> Street, Indianapolis, Indiana, 46201-2511
County:	Marion
Construction Permit No.	097-11490-00339
SIC Code:	4953
Permit Reviewer:	Boris Gorlin

The Environmental Resources Management Division (ERMD) has reviewed an application from Statewide Medical Services relating to the construction and operation of an infectious medical waste incinerator for regulated medical waste (RMW) destruction, consisting of the following equipment:

- (a) One (1) Brookes DRB 800 batch incinerator (Emission Unit ID# 001), with a maximum operating capacity of one (1) ton per day (4000 lb per batch, where a batch consists of a 48 hour period), constructed in September, 1998.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
001	Incinerator	28	2	2850	600

**Enforcement Issue**

ERMD is aware that the infectious medical waste incinerator EU ID # 001 has been constructed prior to receipt of the proper permit. ERMD is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

**Recommendation**

The staff recommends to the Administrator that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 28, 1998, with additional information received on March 30, 1999, May 4, 1999, and October 7, 1999.

**Emissions Calculations**

The calculations submitted by the applicant have been verified and found to be accurate and correct.

### Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	4.58	4.58
Particulate Matter (PM10)	4.58	4.58
Sulfur Dioxide (SO <sub>2</sub> )	0.792	0.792
Volatile Organic Compounds (VOC)	0.109	0.109
Carbon Monoxide (CO)	1.077	1.077
Nitrogen Oxides (NO <sub>x</sub> )	1.299	1.299
Single Hazardous Air Pollutant (HAP) - HCl	<10	1.62
Combination of HAPs	<25	1.62

- (a) Allowable emissions from the medical waste incinerator are determined from the applicability of 326 IAC 4-2-2 (8-A) (Incinerators: Requirements). Emissions are limited to a particulate matter content of no greater than 0.3 pounds per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air.

Emission factors used for emissions calculations are from AP-42, table 2.3-2.

See Appendix A (Emissions Calculation) for detailed calculations.

- (b) The source is constructing and operating the infectious waste incinerator for RMW destruction. Therefore, pursuant to IAPCB regulation 2, section 1-1(1), a construction permit is required which is equivalent to an exemption pursuant to 326 IAC 2-5.1-1.

### County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Marion County has been classified as attainment or unclassifiable for (PM10). Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	4.58
PM10	4.58
SO <sub>2</sub>	0.792
VOC	0.109
CO	1.077
NO <sub>x</sub>	1.299
Single HAP (HCl)	1.62
Combination HAPs	1.62

- (a) Allowable emissions from the medical waste incinerators are determined from the applicability of 326 IAC 4-2-2 (8-A) (Incinerators: Requirements). Emissions are limited to a particulate matter content of no greater than 0.3 pounds per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air.

Emission factors used for incinerator (EU ID # 001) emissions calculations are from AP-42, table 2.3-2.

See Appendix A (Emissions Calculation) for detailed calculations

- (b) The source is constructing and operating the infectious waste incinerator for RMW destruction. Therefore, pursuant to IAPCB regulation 2, section 1-1(1), a construction permit is required which is equivalent to an exemption pursuant to 326 IAC 2-5.1-1.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

## Federal Rule Applicability

There are no National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63) applicable to this facility.

This source is not subject to NSPS CFR 60, Subpart Ce, because it was constructed after June 20, 1996.

The hospital/medical/infectious waste incinerator Emission Unit ID # 001 is subject to the New Source Performance Standard, 326 IAC 12, and 40 CFR 60, Subpart Ec because it was constructed after June 20, 1996. Pursuant to 40 CFR 60, Subpart Ec, Section 60.50.c, the owner (operator) of this source will :

- (b) Notify the EPA, ERMD and IDEM (OAM) of an exemption claim;
- (c) Provide an estimate of the relative amounts of hospital waste, medical/infectious waste, and other fuels and wastes to be combusted; and

- (d) Keep records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted.
- (e) Report semianually the weight of hospital and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted, measured on a quarterly basis.

The permittee shall limit the fuel feed stream for the incinerator Emission Unit ID # 001 to a fuel feed stream, 10 (ten) percent or less of the weight of which it is comprised, in aggregate, of hospital waste and medical/infectious waste as measured on a calendar quarter basis. Pathological waste, chemotherapeutic waste, and low-level radioactive wastes are considered to be other than hospital waste and medical/infectious waste for the purposes of calculating the percentage of hospital waste and medical/infectious waste combusted. Therefore, no other requirements of CFR 60, Subpart E will apply.

### **State Rule Applicability**

#### **326 IAC 5-1 (Visible Emissions Limitations)**

Pursuant to IAPCB Regulation 5-1-2 (Smoke and other visible emissions) and 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in IAPCB Regulation 5-1-3 (Exception) and 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- a) Visible emissions shall not exceed an average of 30% opacity in 24 consecutive readings.
- b) Visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

#### **326 IAC 4-2-2 (Incinerators: requirements)**

Pursuant to 326 IAC 4-2-2 (Incinerators: requirements), the uncontrolled incinerator EU ID # 001 is subject to this rule where the following requirements must be met:

All incinerators shall:

- (a) consist of primary and secondary chambers or the equivalent;
- (b) be equipped with a primary burner unless burning wood products;
- (c) comply with 326 IAC 5-1 and 326 IAC 2;
- (d) be maintained properly as specified by the manufacturer and approved by the commissioner;
- (e) be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;
- (f) comply with other state and/or rules or ordinances regarding installation and operation of incinerators;
- (g) be operated so that emissions of hazardous material including, but not limited to, viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;

- (h) not emit particulate matter in excess of three-tenths (0.3) pounds per thousands pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air. The maximum potential emission rates of the proposed units are less than this limit, therefore the source will be in compliance with this rule;
- (i) not create a nuisance or a fire hazard.

If any of the above requirements is not met, the burning should be terminated immediately.

#### 326 IAC 4-2-2 (Incinerators: requirements)

Pursuant to 326 IAC 4-2-2 (Incinerators: requirements), the uncontrolled incinerator EU ID # 001 and the MED/dispose 580 Packed Tower Pyrolysis Unit are subject to this rule where the following requirements must be met:

All incinerators (including pyrolysis unit) shall:

- (a) consist of primary and secondary chambers or the equivalent;
- (b) be equipped with a primary burner unless burning wood products;
- (c) comply with 326 IAC 5-1 and 326 IAC 2;
- (d) be maintained properly as specified by the manufacturer and approved by the commissioner;
- (e) be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;
- (f) comply with other state and/or rules or ordinances regarding installation and operation of incinerators;
- (g) be operated so that emissions of hazardous material including, but not limited to, viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;
- (h) not emit particulate matter in excess of three-tenths (0.3) pounds per thousands pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air. The maximum potential emission rates of the proposed units are less than this limit, therefore the source will be in compliance with this rule;
- (i) not create a nuisance or a fire hazard.

If any of the above requirements is not met, the burning should be terminated immediately.

#### 326 IAC 11-6 (Hospital/Medical/Infectious Waste Incinerators)

The proposed infectious medical waste incinerator EU ID # 001 is not subject to 326 IAC 11-6 (Hospital/Medical/Infectious Waste Incinerators), because its construction and installation is after June 20, 1996.

#### **Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 189 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either

carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Environmental Resources Management Division (ERMD) Construction Permit Application Form Y.

- (a) This infectious waste incinerator will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.
- (b) See Appendix A (Emissions Calculations) for detailed air toxic calculations.

### **Conclusion**

The construction of this infectious waste incinerator will be subject to the conditions of the attached proposed **Construction Permit No. CP 097-11490-00339**.



## Appendix A: Sample Calculations

### Emission Unit ID # 001 (Brookes DRB 800 batch incinerator with a maximum operating capacity of 4000 lb per batch (where a batch consists of a 48 hour period))

#### **PM/PM10 Emissions** (All PM Emissions are considered to be PM10)

Allowable and potential emissions for Particulate Matter are determined from the corrected concentration and the concentration measured at the stack assuming a PM emission rate of 0.025 lb/1000 lb dry exhaust gas at 70EF, 1 atmosphere, corrected to 50% excess air.

\*Cs (Concentration at the stack)

\*Cc (Corrected Concentration)

#### **PM/PM10 allowable emissions (326 IAC 4-2-2. Incinerators: requirements; 0.3 lb per 1,000 lb of dry exhaust gas at standard conditions corrected to 50% excess air for incinerators with maximum refuse-burning capacity of 200 or more lb/hr)):**

$$Cc = 1.8 * Cs,$$

$$Cs = Cc / 1.8 = 0.3 / 1.8 = 0.16 \text{ lb/1000 lb exhaust}$$

$$PM = \frac{0.16}{1000 \text{ lb ex}} * 2850 \text{ acfm} * \frac{294 \text{ K}}{589 \text{ K}} * \frac{0.0766 \text{ lb}}{\text{Cu ft air}} * \frac{60 \text{ min}}{\text{Hr}} = 1.04 \text{ lb/ hr} = \mathbf{4.58 \text{ ton/ yr}}$$

#### **PM/PM10 Potential emissions:**

$$Cc = 1.8 * Cs, Cs = Cc / 1.8 = 0.025 / 1.8 = 0.014 \text{ lb/1000 lb exhaust}$$

$$PM = \frac{0.014}{1000 \text{ lb ex}} * 2850 \text{ acfm} * \frac{294 \text{ K}}{589 \text{ K}} * \frac{0.0766 \text{ lb}}{\text{Cu ft air}} * \frac{60 \text{ min}}{\text{Hr}} = 0.091 \text{ lb/ hr} = \mathbf{0.4 \text{ ton/ yr}}$$

#### **Potential Emissions for other pollutants**

Potential emissions are calculated using the emission factors of AP-42 table 2.3-2 for Uncontrolled Air Medical Waste Incinerator, assuming a maximum capacity of 4000 lb per batch process (where a batch consists of a 48 hour period).

#### **VOC:**

$$\frac{2.99 \text{ E-1 lb}}{\text{Ton}} * \frac{4000 \text{ lb}}{\text{Day}} * \frac{1 \text{ ton}}{2000 \text{ lb}} = 0.6 \text{ lb/day} = \mathbf{0.11 \text{ ton/yr}}$$

#### **NOx:**

$$\frac{3.56 \text{ lb}}{\text{Ton}} * \frac{4000 \text{ lb}}{\text{Day}} * \frac{1 \text{ ton}}{2000 \text{ lb}} = 7.12 \text{ lb/day} = \mathbf{1.3 \text{ ton/yr}}$$

#### **CO:**

$$\frac{2.95 \text{ lb}}{\text{Ton}} * \frac{4000 \text{ lb}}{\text{Day}} * \frac{1 \text{ ton}}{2000 \text{ lb}} = 5.9 \text{ lb/day} = \mathbf{1.07 \text{ ton/yr}}$$

C      **SOx:**

$$\frac{2.17 \text{ lb}}{\text{Ton}} * \frac{4000 \text{ lb}}{\text{Day}} * \frac{1 \text{ ton}}{2000 \text{ lb}} = 4.34 \text{ lb/day} = \mathbf{0.8 \text{ ton/yr}}$$